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THE  
JABOTICABA  
"THE GRAPE OF BRAZIL"

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# THE JABOTICABA

"The Grape of Brazil"  
(*Myrciaria cauliflora*, Berg.)

BY

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IT SEEMS incredible that although Wilson Popenoe gave us a detailed description of the Jaboticaba, telling us that its culture covers an area of South America as large as that of our Southern States east of the Mississippi river, and did this a quarter of a century ago, it is only recently that the tree has been really brought into fruit in this country. In the meantime, moreover, the fact has been determined that it is not a strictly tropical tree at all but one that will stand temperatures of 26 F. and probably 24 F. without serious injury.

It might be excusable, this procrastination on our part, were the fruit simply a passably good one but in this case it is one so delicious that it deserves to rank with the grape or cherry. I am aware that some of those who believe these temperate region fruits are unapproachable may think this impossible, but their opinions are offset by those of Americans who live in Brazil where the Jaboticabas are grown, who declare that they "simply cannot get enough of them." Certainly a fruit so popular over so vast a territory should be given consideration by people who live in other countries where it can be grown.

The first arrival of this "Grape of Brazil" in Florida was in 1908 when Dr. Wenceslao Bello, President of the National Society of Agriculture of Brazil, sent us plants of three varieties {23429-31} "coroa," "murta," and "paulista." Of these first arrivals the "paulista" alone survived. I have records of it until 1917, after which it disappeared from our collections.

It was in 1913, on an expedition sent by the Office of Foreign Seed and Plant Introduction to Brazil that Messrs. P. H. Dorsett, A. D. Shamel, and Wilson Popenoe secured large numbers of seeds and innumerable photographs of this remarkable fruit tree. The Plant Introduction numbers, 36702, 36709, 36888, 37034, 37090,

37837-39, index the original notes made by the explorers when they collected the seeds near Rio.

In the Journal of Heredity, Vol. V, 1914, Wilson Popenoe published the first full horticultural, illustrated account of the Jaboticaba in English, although brief accounts of it had appeared earlier in Botanical works.

The name of this fruit was so delightfully strange that when I mentioned it in an account I gave of what Dorsett and Popenoe had discovered in Brazil at one of Mr. Alexander Graham Bell's "Wednesday Evenings," in Washington, it so struck his fancy that he named the model hydrofoil boat he was experimenting with at the time the "Jaboticaba." "The name," according to Popenoe, "is of Tupi Indian origin and refers to the fact that the white flesh of the fruit looks like the fat of the turtle, called *jabotim* in Tupi. It is pronounced zha-bu-ti-cá-ba, with accent on the ca."

All the seeds from forty pounds of fruit were sent in, including seeds of several distinct types; they may even have been distinct species according to Popenoe, for two distinct species are called Jaboticaba in Brazil. From these seeds a considerable number of plants were grown and these were distributed rather widely, as I remember, in Florida, Cuba, and California.

On February 3d, 1917, came the big freeze in Miami and my attention was at once attracted to some Jaboticaba plants on Mr. Charles Deering's place at Buena Vista which, to my delight, had been only very slightly injured by a temperature I knew to have been below 26 F. Two specimens at the Brickell Avenue garden came through quite uninjured; one, of the "paulista" {23431} variety, planted in 1908 sent out its young leaves in March as though nothing had happened. At the Brooksville Florida garden, that same winter, a very small specimen that had been only slightly protected by leaves and hay, survived a tempera-





The first Jaboticaba tree to fruit in North America together with its introducer, Dr. William B. Hentz and its present owner, Mr. Ford J. de Haven. It is now 27 years old and has borne for six years. It stands on the estate of Mr. de Haven at 180 Central Ave. East, Winter Haven, Florida. Dr. Hentz is nearest the tree.

ture of 18 F. that killed it back severely but did not kill it completely.

In 1920 when Dorsett and I were discussing what plants to take with us to Panama with the idea of interesting Governor Morrow in our plan to establish there a Plant Introduction Garden for essentially tropical plants, we decided that the Jaboticaba, coming as it did from Rio, would be one of the most suitable species. We included several of them therefore in one of the Wardian cases which we took along. As the site for a garden, which later was chosen at Summit, had not then been settled upon we took them up the Chagras River to Juan Mina and set them out there near an old citrus orchard which had been planted years before. They grew well and a good many years later Ralph Robinson reported seeing them and eating the fruits from them. This situation was about as ultra tropical as any could be, for it was at sea level and within nine degrees of the Equator. The success of these trees at

Juan Mina gave me the impression that its requirements were tropical, regardless of my earlier observations which indicated its ability to withstand the freeze of 1917 in Florida.

In the sandy calcareous soil of our gardens in South Florida where our trees were growing they made a discouragingly slow growth and showed no signs of flowering until May 10th, 1922, when one of the small trees of the Murta variety 37837, introduced in 1914, which had made a slow growth in the Brickell Avenue Garden, came into bloom. The bark of the Jaboticaba tree is smooth and soft, resembling that of the guava and the little white flowers come out directly from the trunk (are cauliflorous as botanists say). They have scarcely any stems and give a striking effect. Of course I took their photograph. I think this was the first flowering of the species in North America; but no fruits formed.

So far as I know none of the many plants of the 1914 introductions, distributed to experi-





The handful of Jaboticaba fruits which Mrs. Krome brought me from the de Haven tree in Winter Haven. These were not so large as some that Mr. de Haven sent me later but they had the same delicate grape-like flavor which I found delicious. The fruit pulp is so brilliantly white that it was difficult to photograph.

menters elsewhere in Florida, survived, although possibly somewhere, someone may have a tree that we have not heard about.

However a single one did escape destruction and is now in the Chapman Field Plant Introduction Garden. It is 37838, the "Jaboticaba de cabinho or Para" but not a grafted tree, for Dorsett and Popenoe were informed that it came true to seed. It was transferred probably from Buena Vista garden to the nursery there in 1925 and in 1928 transplanted to its present dry, rocky situation. Although 24 years old it is only 7 feet tall, having "stood still" all these years. No flowers or fruits have been observed. It is evidence of the amazingly tenacious character of the species but does not show what the tree is capable of when given rich soil and an abundance of irrigation.

Then came the Florida Boom which destroyed the Deering place, followed by the 1926 hurricane which flooded the Brickell Avenue Garden with three feet of salt water and the plants I had been watching disappeared from sight. The one

from Dr. Bello was 18 years old and those introduced by Dorsett, Shamel, and Popenoe were 13 years old. This was a real loss.

Fortunately, in June 1923 I had planted out two tiny little plants of F. H. B. No. 41703 (now S. P. I. 114690) on my own place "The Kampong." They were grown from some seed sent by Mr. B. F. Hunnicutt, an American teacher of Agriculture who was located at Lavras, Minas Geraeis, Brazil who has since become the President of the famous Mackenzie College in Sao Paulo, one of the outstanding scientific institutions of that great republic.

These grew very slowly and feebly for they were in a situation quite as rocky as that in which the trees in the Miami garden had been growing. They gradually became shaded by the more rapidly growing trees planted around them. To add to their unfavorable situation, the County made me set back my wall on the highway, and that came near destroying them.

It goes without saying that I watched my trees closely, fearing to transplant them lest I lose





A Jaboticaba tree in full bearing in a garden in Rio. The fruits are borne in clusters on very short stems or spurs which break through the smooth grey bark of the trunk and large branches. They ripen rapidly and have to be gathered before they decay. Brazilians are inordinately fond of them. A Dorsett and Popenoe photograph.





Slightly enlarged photograph of a fruiting branch of the Jaboticaba on a tree in "The Kampong" at Coconut Grove. It represents the actual size of the fruits when produced on the rich soils of Brazil. On my tree in a poor location the fruits were only  $\frac{3}{4}$  inch in diameter. Those on Mr. De Haven's attained to 1 inch. They are a purplish maroon color and the flesh is white. The flavor reminds one of a grape and is delicious.



them, and looked for flowers every spring but not until May 11, 1935, when they were about six feet high did I find any blooms. Then one tree flowered and the first fruits, 13 in number appeared. These were small but of good quality and they ripened satisfactorily. This event completed the long chain of evidence which I had been watching and which proved that the Jaboticaba tree will stand the lowest temperature which may reasonably be expected to occur in South Florida and will fruit here. In 1936 a few more fruits formed and ripened but in 1937 no flowers appeared, for what reason I do not know, but in 1938 thirty-seven fine fruits ripened and gave my friends a chance to taste this long awaited fruit from Brazil. It was on May 8th that these first fruits ripened in 1938.

From this and other evidence it seems probable that this fruit will be a Spring ripening one, which is an advantage for it is as a fresh fruit that it will first be exploited. There are evidences however that it will fruit at least twice a year and possibly, as in Brazil, by means of irrigation procedures it can be made to fruit more or less throughout the year.

But while I was watching my own little trees on "The Kampong" another and more spectacular experiment was going on at Winter Haven, Florida. I knew nothing of it until May 18th, 1938, when Mrs. W. J. Krome walked into my study with a paper bag full of delicious Jaboticaba fruits. She had gathered them from a much larger tree than mine belonging to Mr. Ford J. de Haven who had bought his place at 180 Central Ave., Winter Haven with the tree standing on it in 1920 from Dr. William B. Hentz, the grandson of a noted American Entomologist, Nicholas M. Hentz who was an authority on spiders and once wrote a volume about them. Mr. de Haven is a descendant of one of the noted early pioneers of Florida Horticulture, Mr. S. C. Inman of Florence Villa.

Last October I had the pleasure of seeing Mr. de Haven's tree and its owner took me to call upon Dr. Hentz who lives near by. From them I gathered the following facts. Dr. Hentz during a stay in Rio in 1911 bought six small inarched or budded trees of the Jaboticaba from a local nurseryman there and shipped them back to New York on the same boat on which he and his family sailed. When he arrived in New York,

through a mistake the plants were sent by freight instead of by express to his home, which was then in City Point, Florida; with the result that they arrived in very poor condition. He planted all of them, but only one, a "Murta" survived. It grew very slowly indeed and was only a small specimen when he moved from City Point to Winter Haven. It had endured without much injury the freeze of 1917 when the temperature went to 24 F. on his place. After it was transplanted, in 1918, to its present site in Winter Haven where it had better conditions than at City Point, it continued to grow slowly. Even after Dr. Hentz sold his place to Mr. de Haven in 1920 it made little growth for several years. It was not until 1932, Mr. de Haven explained, that he saw any signs of fruits. By this time the tree was 21 years old. He observed some fruits on the ground under the tree and to his surprise found it was in flower and fruit. Every year since 1932 it has borne one or two crops of fruit. This year, 1938, perhaps because of the unusually dry weather during the summer, it has bloomed and fruited in February, again in April, a third time in July, and when I saw the tree in October it was once more in flower and fruit.

Dr. Hentz deserves the greatest credit for his initiative and sustained perseverance, for had he been discouraged by the slow growth of his little plant which had "done nothing much" for seven years he would have left it behind when he moved to Winter Haven. To Mr. de Haven also should go a good measure of honor for believing in a tree standing beside his back door for 12 years when he had never tasted its fruit and had only Dr. Hentz' account of it to sustain his faith in it. Who would not have enjoyed sharing in the delight of these two friends when in 1932 these first fruits were discovered lying under the tree!

It is because I believe that the culture of the Jaboticaba will some day be an industry in Florida that I am recording in such detail the story of these first preliminary experiments. Otherwise they will be lost in the scramble of efforts to introduce the Jaboticaba that are now on foot.

In these new efforts it is natural that Prof. P. H. Rolfs, the well known Florida horticulturist, should be taking a part for since many years he has made his home in Brazil. It was through his courtesy that in 1936 I had the pleasure of a



call here on "The Kampong" from the foremost nurseryman of Sao Paulo, Brazil, Senor Joao Dierberger of 100 Libero Badero. He came to see my little trees and to discuss the matter of a systematic importation of the various horticultural varieties of the Jaboticaba which he grows. The Bureau of Plant Industry in Washington now has this matter well in hand. In his estimation this "Grape of Brazil" is one of the finest of the many fine fruits of that vast region where so many fruits new to the North American public are grown.

Regarding the question of the probable requirements of this tree, there is unfortunately still too little data available to Florida horticulturists. What we have is to the effect that it requires rich deep soil and plenty of water. It will grow slowly and fruit sparingly without much irrigation but in its accustomed habitat it gets much more rain in the spring and summer months than it does here. It is essentially a slow grower but it attains to large size and great age as fruit trees go. Trees in Brazil grow to forty feet in height and forty in spread of branches with a trunk that is sometimes seven feet in circumference near the base. It may be expected to withstand winter temperatures of 26 F. and possibly even 24 F. How much lower is not known.

Dorsett and Popenoe's photographs show the Jaboticaba to be a most spectacular tree when in fruit; indeed of all the fruit trees of which I have ever heard it is the most amazing, for the main trunk, sometimes from its very base right up into the larger branches, is covered with great quantities of purple fruits. These sometimes almost completely conceal the light colored bark beneath.

As for the quality of these fruits, Popenoe remarks; "A good Jaboticaba is so thoroughly agreeable as to tempt one to keep on picking

and eating them indefinitely,—a temptation to which it must be confessed, Brazilians often yield. The boys, especially, will spend hours searching out and eating the fruit and their only complaint is that it is impossible to satisfy one's appetite with jaboticabas."

A ripe Jaboticaba is more like a grape than any other of the northern fruits. Its skin is even tougher than that of a scuppernong grape, and thicker and will make it a good shipper but its pulp slips out into the mouth in the same way and its juicy consistency is similar. The flesh is a snowy white, however, and filled with very fine soft fibers which are attached to its several seeds. Its flavor? Well, who can describe flavors? I find it refreshingly sweet, yet not too sweet and can understand how one would become very fond indeed of it had one enough of them. I have never had more than a taste.

It is not only as a fresh fruit that this new introduction may be expected to prove valuable, for it makes delicious preserves, as David Sturrock has demonstrated recently, having made some from the fruits borne by the trees growing in the Harvard Arboretum at Soledad, near Cienfuegos, Cuba; trees coming from the same lot of seed from which my own trees here came. These are larger than any of the Florida trees and already are bearing abundantly twice a year.

And so after the lapse of thirty years, this preliminary report on the Jaboticaba is submitted to the members of the Fairchild Tropical Garden who, it is to be hoped, will grow and fruit it in their yards in the years to come. Had there been better facilities for the testing of this fruit tree here in the early days perhaps these results might have been secured somewhat earlier. I have a feeling that I have portrayed here the small beginnings of a Florida fruit industry.



